



*Boundaryless
Information Flow*

www.opengroup.org

Open Standards - Open Source

The Business, Legal, and Technical Challenges Ahead

June 24-25, 2003, Minneapolis, MN, USA

In association with



UNIVERSITY of ST. THOMAS



The Open Group Conference

Open Source for Standards-based Integration

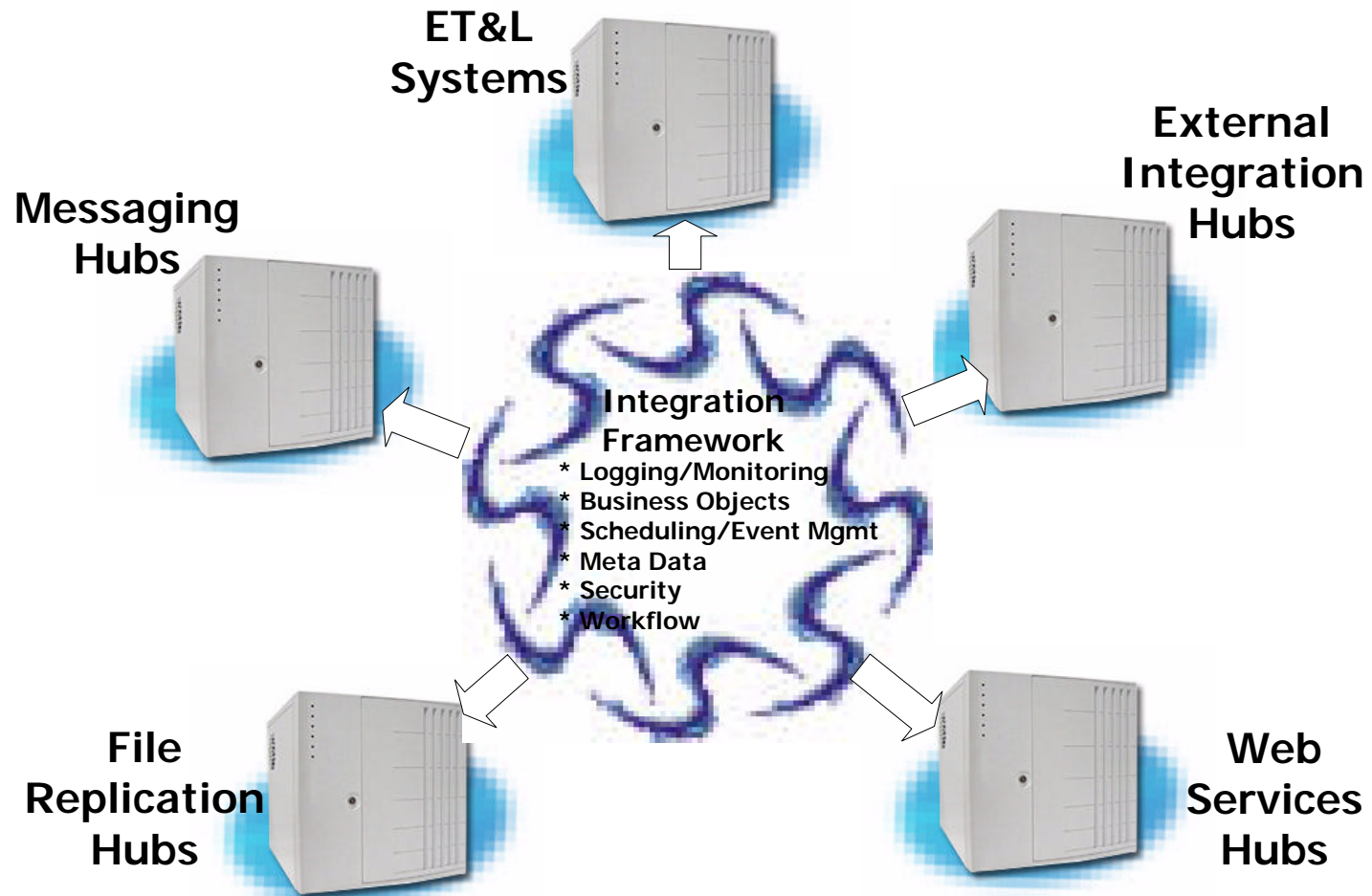
John Schmidt, IS Leader

June 24, 2003

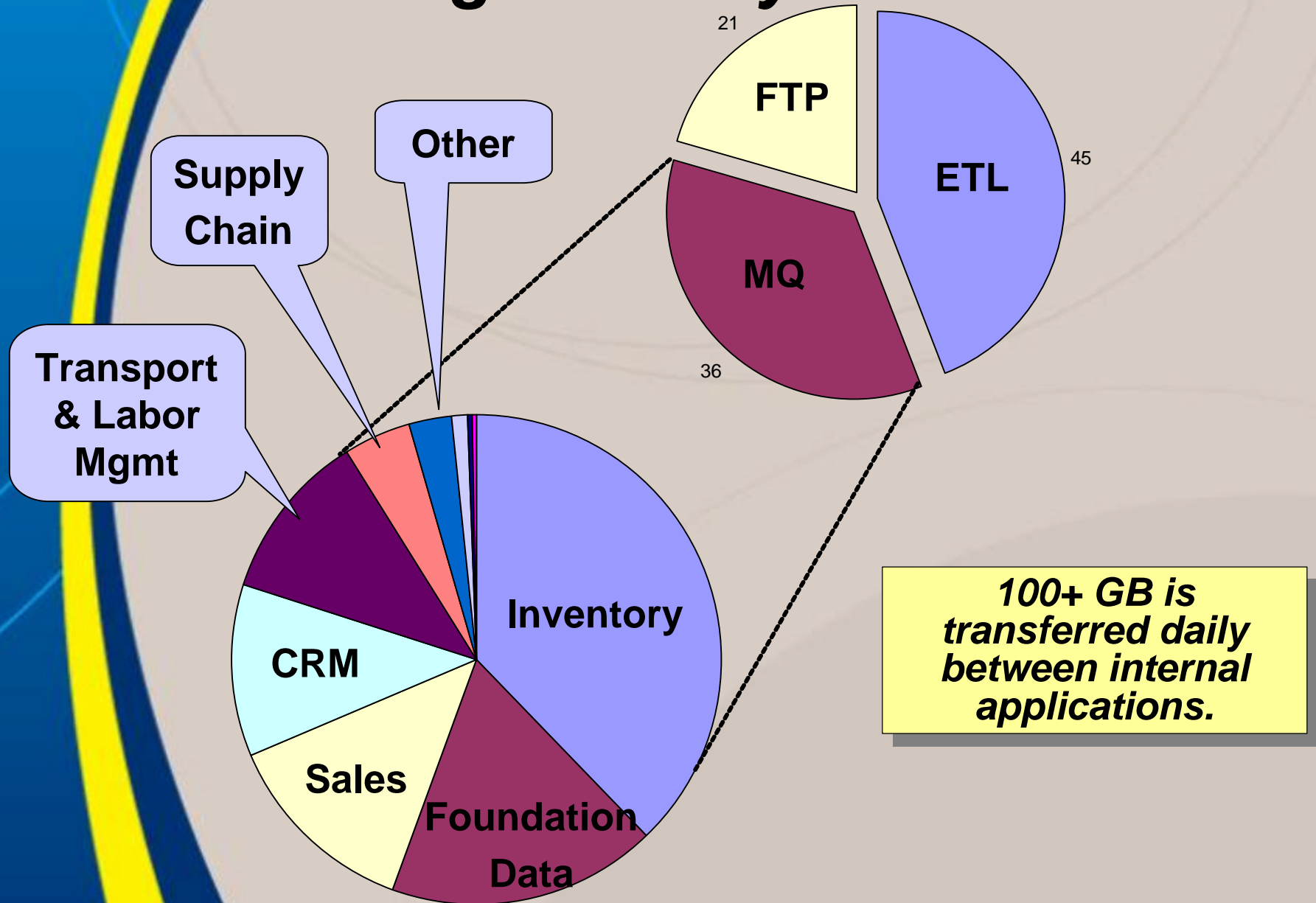
Topics for Discussion

- **The integration problem at Best Buy and how we are tackling it**
- **Open Source in use at Best Buy**
- **Thoughts about how Open Source could be a better path to achieving global standards**

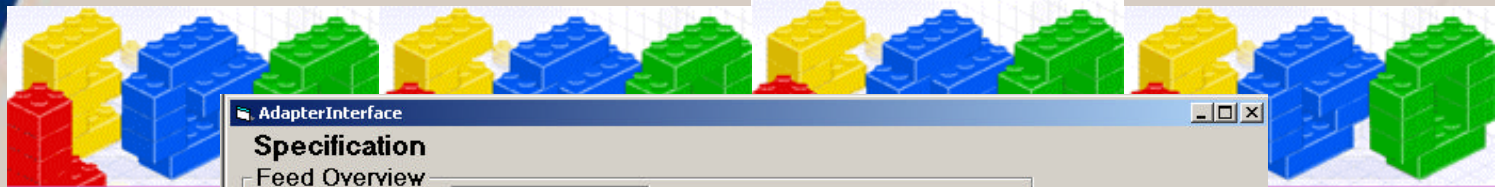
Integration Systems at Best Buy



Integration System Volumes



Off-Shore Integration Factory



AdapterInterface

Specification

Feed Overview

Feed ID: (*)

Feed Name: (*)

Short Description: (*)

Type: (*) Batch (multiple/grouped records/objects) Real Time

Trigger Type: (*) Time/Schedule based Event based Other:

Paradigm: (*) Point-to-Point Publish/subscribe Acknowledgement
 Command (SOAP) Notice of Availability Request/Reply
 Other:

Source and Target System Characteristics

Source System/Application Name: (*)
(also version and date dependencies)

Target System/Application Name: (*)
(also version and date dependencies)

Source System OS: (*)
(also version and date dependencies)

Target System OS: (*)
(also version and date dependencies)

Source System Hardware: (*)
(also version and date dependencies)

Target System Hardware: (*)
(also version and date dependencies)

Source Application Connectivity: (*)

Flat File Java Connector
 JDBC Message Connector
 ETL Tools Proprietary API
 EJB Servlet Screen Scraper
 Other:

Target Application Connectivity: (*)

Flat File Java Connector
 JDBC Message Connector
 ETL Tools Proprietary API
 EJB Servlet Screen Scraper
 Other:

Business Object Sent by Source: (*)

Business Object Returned by Target (if any)

Analysts enter adapter specifications through a series of structured forms.

The offshore factory uses the specs to assemble a fully functioning adapter from re-useable building block components.

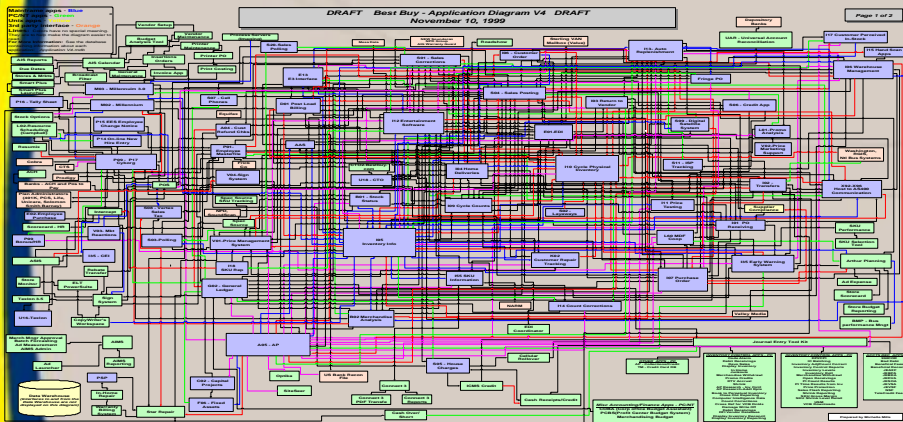
Our adapter framework and off-shore factory processes have reduced interface costs by a factor of four. If we had discovered openadapter.org 2 years ago before we built our own framework – we may have used it. There's no reason to switch now.

The Power of Frameworks

• Typical Real-Time Interface Cost in 2001	\$20,000
• Typical Real-Time Interface Cost in 2003	\$4,500
• Interface Development “Cycle Time” in 2001	20-30 days
• Interface Development “Cycle Time” in 2003	4-6 days
• Number of Adapters built in the past year	400
• Adapter code re-use for the last 20 adapters	99.8%
• Number of ETL interfaces built in May, 2003	550
• Total number of ETL interfaces in production	8,765

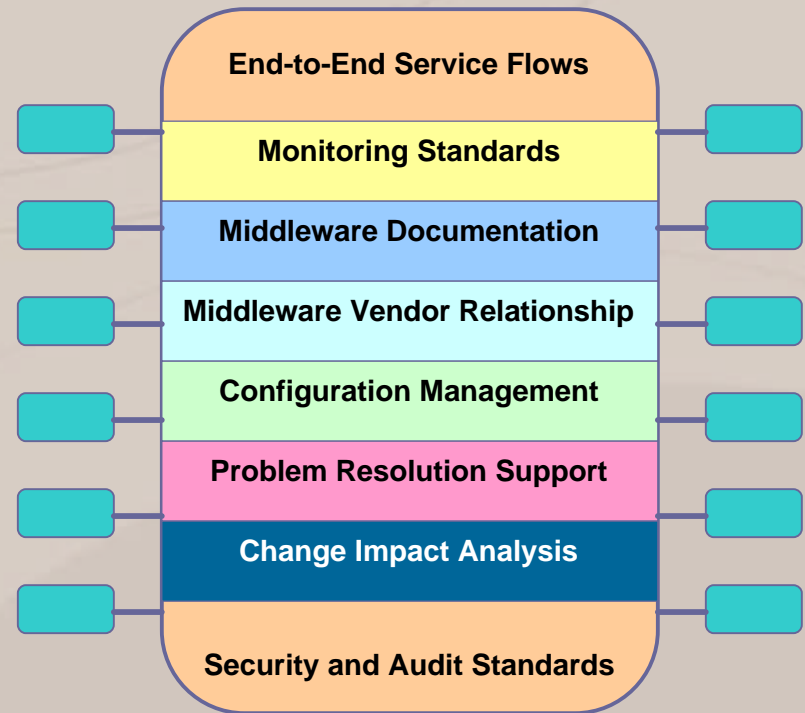
Data Exchange Administration

“One stop shop” for support, problem management, capacity management, configuration management, (etc.) for all data movement.



Traditional dispersed and fragmented interface support


To



Common Shared Services
By Central Team

Metadata Management Office

Improving modeling maturity and CMDB quality



CMM Level	CMM for Software	CMM for Modeling
Level 5	Optimizing	Learning
Level 4	Managed	Predictive
Level 3	Defined	Dynamic
Level 2	Repeatable	Active
Level 1	Initial	Static

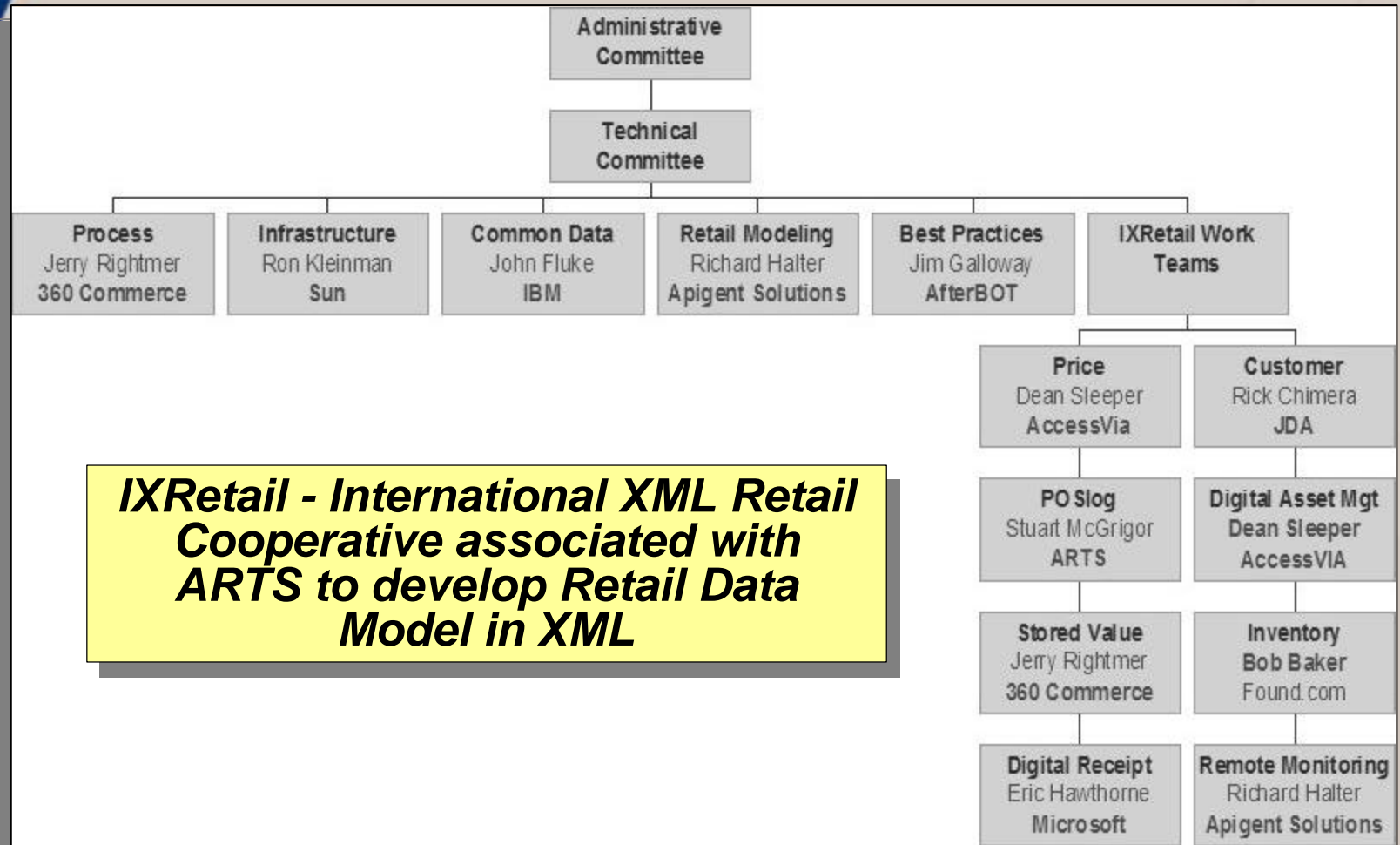
Predictive models can help answer “what if” questions about acquisitions & new programs

Metadata Management becomes sustainable at level 3

Open Source at Best Buy

- **Eclipse (IDE for Java development)**
- **Ant/Nant (build program for java and .net projects)**
- **Xerces parser (XML parser)**
- **Apache web server**
- **JUnit/NUnit (test suite for java and .net programs)**
- **JBoss (webMethods 6.0 uses it for its J2EE container)**
- **Vim (General purpose editor - Vi clone)**
- **Linux (a couple rogue machines)**
- **TomCat (Jsp container)**
- **Jetty (Jsp container - used by AppTalk to provide real-time/event driven adapters)**
- **SendMail**
- **Cvs and wincvs (source code control)**

What's wrong with this picture?



Few end users take an active role in standards activities - even in industry-specific initiatives

Users have abdicated responsibility for standards, and vendors haven't done a great job filling the gap

“The great thing about software and standards; there are so many to choose from.”

We can learn from successes & failures:

- **C# vs. Java,**
- **COM, Corba, J2EE**
- **Ethernet vs. Token-Ring**
- **HTTP**
- **TCP/IP**
- **CVS vs. PVCS**
- **UDDI**

Options for getting to standards

	<u>Traditional</u>	<u>Open Source</u>
Driver	Vendors	Users/Developers
Process	Analytical	Empirical
Acceptance	Agreement	Evolutionary use
Deliverable	Specification	Software (Code)
Motivation	Marketing/Sales	Operations

“Unix, like all great software, was developed without a master plan but was sufficiently flexible to evolve into a great operating system.”
Eric Lundquist, eWeek, June 9, 2003

Middleware Open Source Sites

- www.openadapter.org
 - (Java adapter framework)
- www.objectweb.org
 - (object-oriented and component-based middleware)
- <http://rebeca.sf.net>
 - (event-based infrastructure – soon to be on sourceforge)